

## From the Editor

Howdy All,

Running a bit late this month. A houseful of grandchildren (5 of them, anyway) were here for several weeks, plus work commitments seemed to distract me a bunch more than normal. Anyway, feast your eyes on another issue of The Bark, with contributions from an number of different club members.

**PICNIC:** Paul W7PFU and Jan KHTU assure us that if we go hungry on August 30, it's our own fault. The last Saturday of the month will feature the standard mini-swap meet, donuts, and chili dogs in the morning. Beginning at about 2:30 pm the annual picnic will kick off, with more food to be had. Bring your favorite pot-luck salad, veggie, or dessert to share. RCT will furnish burgers, buns, condiments, and soft drinks.

**SALMON RUN:** The annual Washington State QSO party (aka "Salmon Run" will be held September 20 & 21st with the Clubhouse facilities active. We need hands to man the radios, plus it is nearly always helpful to have a cheering section. In combination with this, RCT holds a pledge drive to help raise funds for various projects and operating expenses throughout the year. Look for a pledge form in the mail, and take time to make a pledge to help keep us in the black.

**SEPTEMBER 10th General Meeting Program:** A special presentation about Salmon Run will be made by Jim Hadlock K7WA from the Western Washington DX Club, general sponsors of the event.

**MIKE & KEY HAMFEST:** Upcoming in March, 2015. The W7DK Property Management Team has committed to having a couple of vendor tables at the event this year, following last year's hiatus. If you've got an item that you wish to donate to the club that might be suitable resale at the hamfest, please contact any member of the Property Management Team. OK, nuffernow, I am running out of space. Stay tuned for more hot scoops next month.

73 Mike

In This Month's Issue	
Minutes and Meeting Highlights	Page 2
RCT In Action	Page 5
A Farm Radio Story	Page 6
Around the Clubhouse	Page 9
The Fine Print	Page 10



**Board of Directors Meeting****2 July 2014 Minutes**

The 2 July 2014 Radio Club of Tacoma Board meeting was held at the Radio Club of Tacoma.

Officers and board members present:

Vice President	Mike Mikuchonis W7XTZ
Secretary	Larry Watson KD4VOM
Treasurer	Bob Purdom AD7LJ
Board Member	Bruce Hanson WE7P
Board Member	Nick Winter K7MO
Board Member	Mike Finnie W7MWF
Board Member	Mike Elwell W7GHW

*There were 15 names on the attendance roster which is attached to the original copy of these minutes*

**Quorum:** Yes

The meeting was called to order at 7 pm by Vice President Mike Mikuchonis W7XTZ.

**Minutes:**

**The minutes of the 7 May 2014 Board Meeting as distributed and coordinate, were approved by consent. .**

**HEALTH AND WELFARE:** None reported

**SECRETARY'S REPORT:**

Bank Statements	Newsletters
Utility and Phone Bills	QEX Journal
Electric Radio	Contest Journal
Memberships	Lakewood MakerFest
Obliteride fund raiser	QSO Card
Pierce Property Valuation	

**TREASURER'S REPORT:** Bob AD7LJ Presented the financial report.

*Copies of the financial report are attached to the original copy of these minutes.*



*The Radio Club of Tacoma*

**Your Radio Club  
Needs your help**

**RCT needs donations....  
of Amateur Radio Equipment**

**COMMITTEE REPORTS:**

**Membership:** George K7GRS reports several new promotional members

**Training:****Next Technician Class: October 11/12****Field Day**

**Randy WB4SBP** provided preliminary results for the Field Day operations, including the early QSO and Point counts. We did better in many categories than last year, and had a good number of first timers on the air.

**Mike Elwell W7GHW**

Mike thanked everyone who made this year's Field Day a success.

He especially noted the work that Randy WB4SBP and Bruce WE7P did preparing the stations logging software, transmission lines switching and cabling.

And to Paul W7PFU and the kitchen team...

Mike noted the official declaration of Amateur Radio Week by the Tacoma City Council

**Information Technology:**– Randy Myers WB4SBP

Randy reported that the approved IRLP replacement computer is awaiting information from the IRLP manager.

**HF Operations:****HF Room Patch Panel Project: AI N7OMS**

The patch panel worked ok for Field Day, and some wrap up work remains to complete the job.

**Repeaters:** Nick K7MO**Repeater Status:**

W7DK 145.21 Repeater, Bates Channel 28: Operational

W7DK 147.28 Repeater Clubhouse: Status – Operational

W7DK 147.38 Repeater Crawford Mountain: Status – Operational, awaiting installation of the 440 MHz control unit

W7DK 440.625 Repeater Clubhouse Status – Operational

IRLP (147.28 Repeater) Operational

### Facilities Management:

**Upstairs Carpet:** Bruce WE7P reported that the upstairs landing carpet has been repaired at a fraction of the authorized cost.

### Property Management:

**RCT riding lawnmower:** Has been sold for \$ 350.00

**Museum:** Rich KR7W

No Report

### UNFINISHED BUSINESS:

**General Membership Meeting Programs:** Arranged by Dave W7UUU

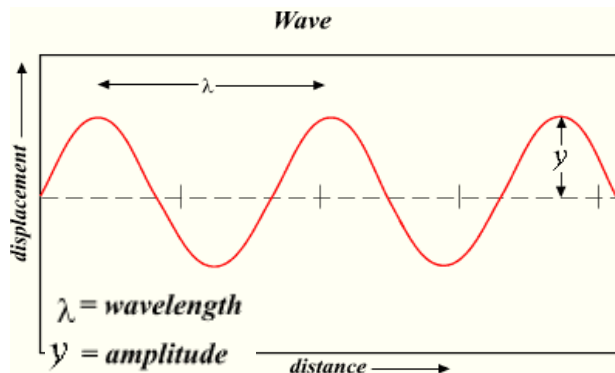
**July - 10-meter band** - what it's all about; band plan; propagation; what to look for with antennas and what to avoid; first-timer 10m folks and what to do about an HF radio

Dave will also touch on **6m and 2m SSB** for Technician's to think about trying a VHF contest

Presenter will again be Dave, (working on getting other folks!)

**August - Why upgrade?** How hard is the General Class test, why would someone want to upgrade? Overview of all the bands that become available and what they're all like, radios for full HF operation, quick overview of antennas for HF.

**September - Salmon Run** as requested by Nick Winter and Gary McAdams - Nick is going to have Jim (don't recall his call) come in and do a full presenta-



tion just in time for the event - A quick intro then turn it over to WW DX Clubs JimK7WA.

### Workshop Project

The July 23rd Workshop is awaiting topic development.

### NEW BUSINESS:

### DISCUSSION TOPICS:

**Lakewood MakerFest:** Larry KD4VOM reported on an invitation to participate in the Lakewood Library sponsored MakerFest scheduled for Saturday 9 August from 1pm to 5 pm. Bob AD7LJ expressed an interest in participating as has Anne N7ANN and Dave W7UUU Ellison

**The RADIO CLUB OF TACOMA needs your donations.**

**DONATIONS PLAY A BIG PART IN FUNDING THE OPERATION OF RCT. IF YOU HAVE UNWANTED OR UNNEEDED AMATEUR RADIO OR RELATED EQUIPMENT. PLEASE CONSIDER DONATING IT TO THE CLUB**

If you have something to donate please contact  
Frank Palmer AC7JY, Property Manager

### **RCT General Meeting Notes 9 July 2014**

The 9 July 2014 General Membership meeting was held at the Pierce County Library Administration Building at Waller Road and 112<sup>th</sup> Street.

Secretary Larry Watson KD4VOM called the meeting to order at 7:30 PM.

Officers and board members present:

Secretary	Larry Watson KD4VOM
Board	Mike Finnie W7MWF
Board	Bruce Hanson WE7P

*A sign in sheet with the names of members and guests is attached to the original copy of these minutes. There were 31 names on the attendance roster.*

**PLEDGE OF ALLEGIANCE:** Was led by Secretary Larry KD4VOM

**INTRODUCTIONS:** Guest welcoming and self-introductions were completed..

Valerie reports a new call: K7VAP, Congratulations.

**ILLNESS OR SILENT KEY:** None reported

**Correspondence:**

Newsletters	Utility Bills
Bank Statements	Membership Renewals
Newsletters and Journals	
Obliterate volunteer solicitation	
Lakewood MakerFest Invitation	

The Field Day Pig was circulated to collect donations for Field Day operations.

**Meeting Refreshments:** Anne Ellison N7ANN provided an outstanding array refreshments and snacks. Our refreshment stand sports new and less wasteful coffee pots, thanks Dave and Anne.

**COMMITTEE REPORTS:**

**Membership:** George K7GRS reports the membership stands at 310

**VE REPORT:** Leonard Burstiner KA7NWF provided a VE report overview on behalf of VE coordinator John Clarke AC7WW

Here is the text of John Clarke AC7WW report received by the Secretary;

The number of VE's overwhelmed the number of candidates at the testing session Tuesday, July 8<sup>th</sup> at the Radio Club of Tacoma clubhouse. Seven VE's graded six elements from three candidates. Two new Technicians joined the Amateur Service and one candidate advanced to General.

Leonard, KA7NWF  
Jon, AD7AW  
Stephen, AD7AB

Jan, K7HTU  
Rich, KK7VH  
Chris, AE7XQ

The next monthly scheduled testing session will be Tuesday August 12, 2014

**Training:** The next Technician's class is pending preparation to accommodate the new ARRL Technician's manual and question pool update.

**Facilities:** Bruce Hanson WE7P reports the upstairs carpet has been repaired at considerably less than budgeted for.

**Field Day:** Randy Myers WB4SBP provided an overview of Field Day operations. We had a good number of new operators this year and in many areas exceeded our last year's scoring. There is a group seriously considering doing next year's Field Day in the field

**PROGRAM:** Dave Ellison W7UUU

Dave provided another First Timer (and more) orientation to the 10-meter band - what it's all about; band plan; propagation; what to look for with antennas and what to avoid; first-timer 10m folks and some considerations about your first HF radio.

**ANNOUNCEMENTS:**

**RCT Workshops:** Randy WB4SBP announced that the July 23<sup>rd</sup> workshop will be on Software Defined Radio by Bruce WE7P.

**BARK:** Mike W7MWF announced the BARK is available for download from W7DK.org

**DISCUSSION TOPICS:**

RCT Picnic: Casey Hicks WY7V asked if there was going to be a Picnic this year. There is a Picnic team currently planning this years' soiree.

**SHOW AND TELL:** Dave W7UUU demonstrated an easy to build and effective 10 meter antenna.

**TUNING AND TRAFFIC:** Reidar NS7SN reported on a rare late night 15 meter set of contacts; all 20 over 9 with Great Britain; and Omsk, Siberia, Odessa, Ukraine and more via the Polar route.

Randy WB4SBP was browsing spots and saw some activity on 6 meters, went to the clubhouse, fired up the rig and made contacts with Manitoba, Canada as well as Utah, Idaho and Pt Townsend.

Dave W7UUU recently made his first contact with Antarctica with RI1AC on CW

**DOOR PRIZES:** There were several door prizes; Paul Matney W7PFU took home ARRL Centennial Patch and commemorative pin, while Bruce WE7 and Randy Myers WB4SBP picked up Yeasu hats

**The meeting was adjourned at 9:15 pm**



# RCT IN ACTION

## Lakewood MakerFest

### August 9, 2014

Club members Larry KD4VOM and Dave W7UUU displayed communications artifacts and provided information to scores of participants at the 2014 MakerFest. Both were delighted at the positive reception that their booths received, and said it was one of the most enjoyable events that they had attended. Thanks guys for putting RCT's best feet forward.

*Photo credits Larry KD4VOM and Michelle Angell*



## From the Past... A Farm Radio Story

### By Rich KR7W

Joe stopped by the other day whilst I was putting the finishing touches on an old radio I picked up at the PSARA Summer Swap Meet a few years ago. He critically asked something like, "Whatcha working on that thing for? It's not an Amateur Radio. Ain't Ham Radio our hobby?"

Joe's comment sort of torqued my wrench a bit. My reply was, "This a Farm Radio from 1938, Joe. Look at the dial. Notice it has a band called **AMATEUR** that covers 160 and 80 meters and the old police band. Another band called **FOREIGN** has 40 and 20 meters. Some young farm boy or girl could have been listening to hams making far away QSOs and been inspired to learn the code and get their Class B license back then. That's how I got started— by listening to hams and foreign broadcast on my Uncle Jack's big ole Zenith console". Joe then wanted to look at the dial closer and take a listen.



The new white LEDs behind the dial makes it POP when the lighting is low. The Amateur Band is green. Foreign is Red. The all AM Band is white.

85 percent of rural families did not have electricity in 1930. Farm radios provided entertainment to those who could afford them. Early farm radios ran on expensive dry cell batteries that had to be replaced when depleted... or a 6 volt rechargeable automotive battery from the farmers tractor or Model T Pickup or Chevy.

Some farm radio users took their battery to town



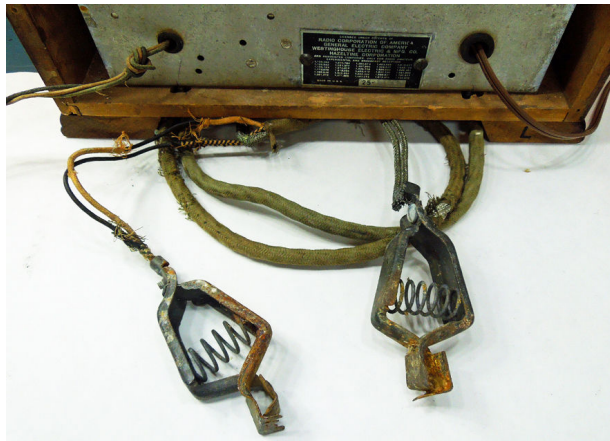
The Lafayette M44 stands about 18 inches tall and 12 inches wide. The cabinet is mahogany plywood with some nice inlay work on the front panel. I removed everything from the cabinet and refinished it with Mohawk Spray Lacquer.

to have it charged by a gas motor driven electric plant at the automotive filling station.

Technology marched on. In 1927 in Cherokee, Iowa the Albers Brothers started up their business— The Albers Propeller Company - to build wind powered battery chargers. They were quite successful and became the Wincharger Co. in Sioux City, Iowa. One day Cmdr McDonald of the Zenith Radio Corp. casually stopped by and bought 51 percent of the company. Zenith then engineered and sold a line of 6 volt farm radios which connected to the Wincharger system. The buyer would receive a discounted package deal which brought the voices of Jack Benny, The Shadow and the Lone Ranger into the family living room each evening.

All of the farm radios I've worked on use low current tubes to keep the battery from depleting quickly. Using low current tubes to produce an adequate sound level was the radio engineers big challenge. These tubes operate at 2.7 volts at 50 milliamps filaments and about 125 volts for the plate supply. Normal plug into the AC mains radio tubes would use 6 volts / 300 milliamps filaments and 130-300 volts for the plate. This radio's tube filaments do not appear 'lit up' when they are on. A lot of people might think the tube

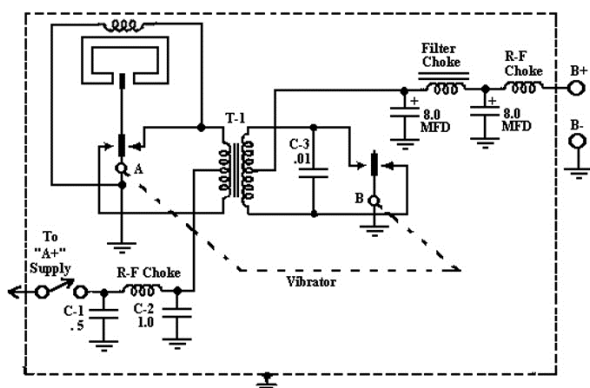




Pretty massive alligator clips to attach to the automotive or tractor battery. The green cloth covered cable is shielded to keep vibrator noise from getting into the radio circuitry. More on this follows.

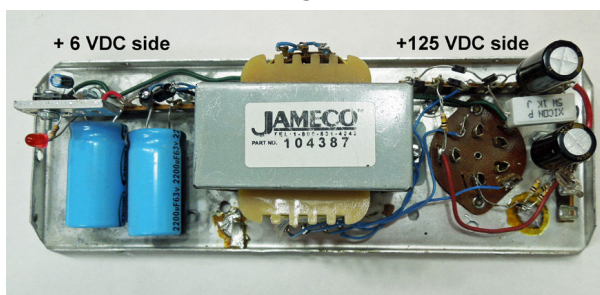
was burned out because of this. This low filament current required no warm up time which caused the radio to come to life right away. In fact, Suspicious Joe remarked, "It's a trick. You've added transistors to replace the tubes, didn't ya?" when he first watched me demo the radio.

This radio's tube filaments were powered from the 6 volt battery. The tube plate supply came from a vibrator power supply— much like car radios had in the 40s and first part of the 50s. I remember pounding my fist on the dashboard of my '47 Chevy to get the pendulum moving in the worn out vibrator in the car radio. This radio's vibrator was a synchronous vibrator and when coupled with its transformer provided DC volts without a rectifier tube. The vibrator power supply was built in an enclosed metal box to eliminate contact sparking interference and hung from springs from the top rear of the radio to reduce vibrator vibration from resonating in the



wooden cabinet.

For this radio's restoration I decided to eliminate the vibrator and rebuild the power supply to run off of 120 VAC Mains power. It was a challenge to figure out how to replace the vibrator circuitry and come up with the needed tube voltages. The only documentation I could find on this radio model was the schematic— which did not indicate what the tubes plate voltages were supposed to be. The specs for each tube were found in my 1949 ARRL Handbook Tube Section. The handbook gives the maximum tube voltages which may not have been what this radio was designed around. I settled for 125 VDC for the plate voltage. The tube filament and pilot lamp voltage was obvious at 6 volts. I luckily had a power transformer on hand that provided 120-0-120 VAC and 12-0-12 VAC to create the two needed DC voltage sources.



The re-invented power supply without the RFI proof cover. I like to install frivolous voltage indicators in my supplies. Red LED indicates the presence of +6 volts... and NE-2 bulb indicates that the +125 volts HV is dangerously ON. The brown oval shaped gizmo on the right side is the socket to receive the umbilical cord from the radios main chassis. Switched 120 VAC Mains IN becomes +6 and +125vacuum tube volts OUT.

Replacing all of the wax paper capacitors and out of tolerance resistors is standard restoration procedure. I discovered that one tube in each of the series filament strings was burned out. I betcha that someone connected those big alligator clips up to a 12 volt automotive battery and the tube filaments secretly and quietly melted in half. Replacement tubes were more difficult to find than tubes from the post WW2 era of radios.

To the left... is a schematic of a Synchronous Vibrator. Note the two pendulums (A&B) with contacts move in unison or 'in sync'. Also note the RF Chokes used to choke out the make/break contacts sparking noise from getting into the radio circuitry. Other precautions are used in this radio to minimize sparking noise.

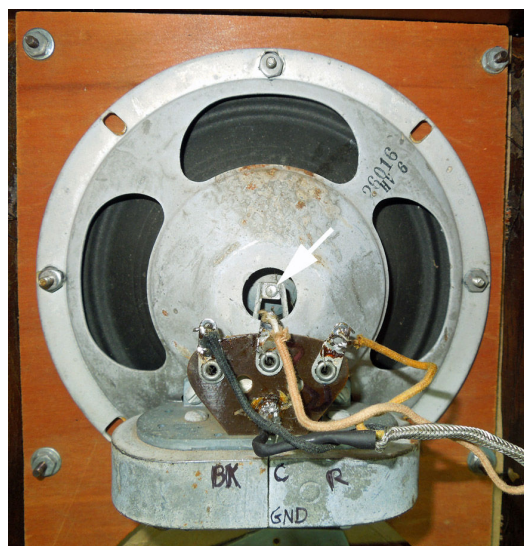


It's hard to ignore the big metal power supply box hanging by small springs above the easily breakable vacuum tubes. A shielded umbilical cable connects the main chassis. Those big alligator clips (in a previous photo) would emanate from the rubber grommet on the right side of the chassis. Now you see a regular AC line cord in its place.

I found myself scratching my head and wondering where the radios audio output transformer was. The plates of t'he dual triode audio output tube (very efficient class B Push-Pull to save battery juice) were connected directly to the speaker. It turns out that this speaker is of the ***moving iron*** type. The audio transformers windings are connected around a magnet on the speaker. A "moving iron" vane is placed between the magnet and the paper speaker cone. When the radio is off the iron vane is resting in place between the poles of the magnet. When the audio tubes are providing audio energy then the windings are adding or subtracting to the pull of the magnet and causing the iron vane to move the speaker cone at the audio sound rate. This type of speaker was interim technology between the big horn speaker of the 1920s and the modern moving coil speaker from WW2 to now.

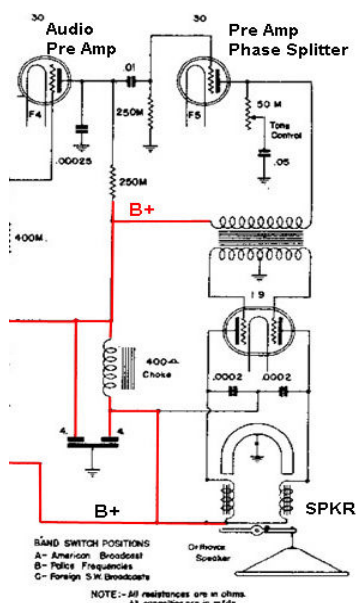
Conclusion: This radio turned out to be surprisingly sensitive. It had to be somewhat misaligned to keep the IF amplifier from oscillating. It receives very weak stations in my basement lab at night without any antenna wire connected.

It's not Hi-Fi but that is one of the compromises the farm radio engineer had to make to save battery power. All in all... This radio restoration is in the top 5 of the hundred or so radios I've restored. Joe took it home to listen to Burns and Allen, The Shadow, and the Grouch Club- all part of his extensive collection of old radio shows on cassette tape to his Ramsey Home AM broadcast transmitter kit. Joe also promised he would connect an antenna up and listen for the AM hams who operate their boat anchors on 3870 KCs.



The white arrow points to the moving iron vane that moves the paper speaker cone.

Schematic below shows the Dual Triode audio tube plates feeding the coils in the speaker.



I am glad that Joe stopped by...I think he learned something. I sure did. I hope you readers out there in Barkie Land did also.

Next time:  
Roosevelt's  
REA of 1935.

Regards,  
Rich KR7W  
30



## *News around the Clubhouse*

An assortment of tidbits about members and events

Because there seems to be a dearth of qsl cards for this issue, instead we'll take the opportunity to highlight a few of the accomplishments of some of our members.

### QRZ.com Honors RCT Secretary



Whadda ya know. On Thursday, July 31, 2014 the home page of QRZ.com was graced by none other than our illustrious club secretary, Larry KD4VOM Watson.

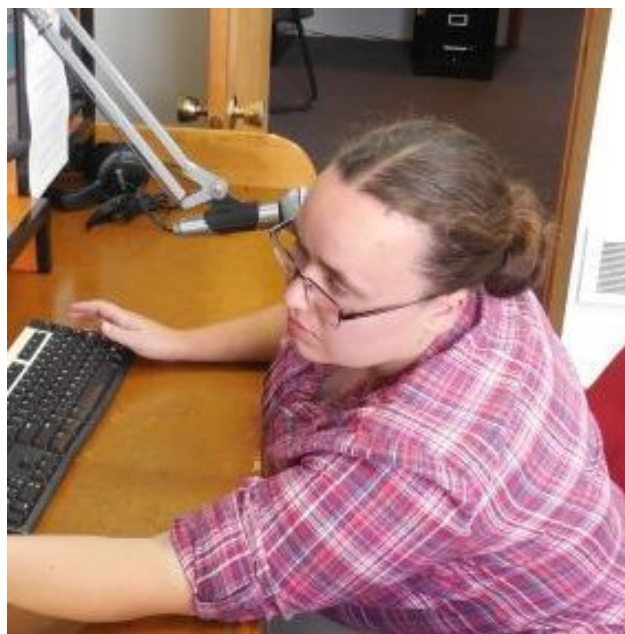
Fortunately, the eagle eye of Bob K7MXE took note of this esteemed honor and captured a screen shot of it to preserve it for posterity.

### Antarctica - on a 20 Meter Dipole

Recently, Valerie K7VAP acquired a new (to her) HF radio and undertook to build a dipole antenna. During her first night of operation with them, she managed to get a qso with Antarctica.

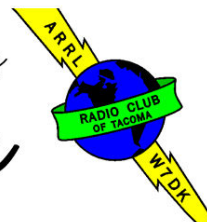
Valerie, pictured to the right during the 2014 Field Day was also an important part of the operating team.

Well done, Val





*The Radio Club of Tacoma's*  
**Logger's Bark**



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*The Logger's Bark* is the **OFFICIAL PUBLICATION OF THE RADIO CLUB OF TACOMA...** and is published by W7DK Press, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law, and all proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98411, phone: 253-759-2040.

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### Club Officers

President: Gary McAdams WG7X 253-984-0868 email to [wg7x@w7dk.org](mailto:wg7x@w7dk.org)

Vice Pres: Mike Mikuchonis email to [w7xtz@w7dk.org](mailto:w7xtz@w7dk.org)

Secretary: Larry Watson KD4VOM email to [kd4vom@w7dk.org](mailto:kd4vom@w7dk.org)

Treasurer: Bob Purdom AD7LJ email to [ad7lj@w7dk.org](mailto:ad7lj@w7dk.org)

### 5 Board Members (listed in no particular order)

Al Ferguson N7OMS email to [n7oms@w7dk.org](mailto:n7oms@w7dk.org)

Nick Winter K7MO email to [k7mo@w7dk.org](mailto:k7mo@w7dk.org)

Bruce Hanson WE7P email to [we7p@w7dk.org](mailto:we7p@w7dk.org)

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Contributors: The members of the Radio Club of Tacoma...

Send articles to: [w7dk-news@earthlink.net](mailto:w7dk-news@earthlink.net) or Bark, 1506 N Stevens St, Tacoma, WA 98406

**The Fine Print:** The Logger's Bark is published once a month for the membership of The Radio Club of Tacoma or interested ham radio enthusiasts. The Bark is delivered by PDF file on the club's website: [www.w7dk.org](http://www.w7dk.org).

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**Membership Info:** FULL (licensed) and ASSOCIATE (non licensed) is \$30 per calendar year. \$25 for Licensed Seniors (65 and over). Licensed family members at same address pay \$15 each for the first two and are free for the third, fourth, and so on. Fulltime students, licensed or non licensed, up to age 25 are \$15 per year. Note: fees are applicable for the calendar year: Jan to Dec. Lifetime membership is 20 times the yearly fee you are eligible for.. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.

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### *Radio Club Repeaters*

**Central Tacoma:** 147.280 + PL=103.5

**Crawford Mountain (SE Thurston County):** 147.380 + PL=103.5

**Central Tacoma:** 440.625 + PL=103.5

**North Tacoma:** 145.21 – PL=141.3

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**Remember - For the latest and most current information on events and activities, visit the Radio Club of Tacoma Website [w7dk.org](http://w7dk.org). Be sure to enroll as a member to see all the info.**

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***The Loggers Bark***  
**Radio Club of Tacoma**  
**PO Box 11188**  
**Tacoma, WA 98411**



***W7DK***

Proudly celebrating  
**97 years**  
of Amateur Radio Service  
to  
Pierce County and the  
Pacific Northwest

## Upcoming RCT Events

### **REGULAR EVENTS**

**Club Meetings:** Second Wednesday of the month at the Library Administration Building 112th and Waller Road. The club meets at 7:30 PM. Everyone is invited to attend.

**Workshops:** Fourth Wednesday of the month at the Clubhouse, 1249 So. Washington St, Tacoma. A variety of training and educational events will be conducted.

**Board Meeting:** First Wednesday of the month at the RCT clubhouse. All members are welcome to attend .

**Bark Deadline:** Last week-end of each month. Please submit articles by that time!

**Check into the weekly two meter net:** Tuesdays at 7:30 PM on the club repeater on 147.280 MHz

**Check into the weekly 10 meter net:** Sundays at 8:00 PM on 28.375 MHz .

### **SPECIAL EVENTS**

**Annual Picnic:** August 30, 2014 2:30 pm 'til ?? At the RCT Clubhouse

**Salmon Run 2014:** September 20-21 @ the RCT Clubhouse .Annual Washington State QSO Party and Club Fundraiser.